L 04309-67

ACC NR: AP6018266

sodium and sealing; 5) complete thermal treatment (quenching from 1050—1080C in oil or air and annealing at 760—800C). Valves made from steel EI992 have been successfully tested and are used at present in truck engines. Orig. art. has: 2 tables and 1 graph.

SUB CODE: 11,13/SUBM DATE: none

Card 2/2

ACC NR: AT6034054 (N) SOURCE CODE: UR/0000/66/000/000/0088/0092

AUTHOR: Chikishev, Yu. G.; Rafikov, S. R.; Tsetlin, B. L.

ORG: Institute of Organometallic Compounds AN SSSR (Institut elementoorganicheskikh soyedineniy AN SSSR)

TITLE: Characteristics of radiation polymerization of diphenylvinylphosphine oxide

SOURCE: Simpozium po radiatsionnoy khimii polimerov. Moscow, 1964. Radiatsionnaya khimiya polimerov (Radiation chemistry of polymers); doklady simpoziuma. Moscow, Izd-vo Nauka, 1966, 88-92

TOPIC TAGS: radiation polymerization, organic phosphorus compound, polymerization kinetics, reaction mechanism

ABSTRACT: The principles of radiation polymerization of unsaturated organophosphorus compounds were investigated in this study with molten diphenylvinylphosphine oxide. Products with relatively high molecular weights (higher than in chemical polymerization) were obtained. Kinetics study showed the monomer was completely converted to polymer. There was no induction period and the polymerization rate increased constantly up to 60-70% conversion. There was no gel effect as is usual in radiation polymerization. Polymerization rate was directly proportional to radiation dosage, so radiation yield and molecular weight were independent of dosage. Energy

ACC NR: AT6034054

of activation was 6.3 kcal/mol. Studies of polymerization in solution and with inhibitors and initiators confirmed the radical mechanism of polymerization. X ray study showed the monocrystalline structure was retained up to about 20% polymerization in the solid phase; by 50-60% conversion the polymer had no characteristic crystalline lattice. Solid phase polymerization has not been noted before. It has the characteristics of a homogeneous process. The polymer forms solid solutions with the monomer in all ratios. Orig. art. has: 5 figures.

SUB CODE: 07/ SUBM DATE: 25Jul66/ ORIG REF: 004/ OTH REF: 006

Card 2/2

CHIKISHEV, Yu.G.; TSETLIN, B.L.; RAFIKOV, S.R.

Mechanism of the radiation polymerization of diphenylvinylphosphine oxide. Vysokom. soed. 7 no.9:1489-1494 S '65.

(MIRA 18:10)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

CHERNER, I.B., vrach; CHIKMAREV, K.M., fel'dsher

Lidiia Mitrofanovna Lobkova. Med. sestra 20 no.3:50 Mr '61. (MIRA 14:5)

(LOBKOVA, LIDIIA MITROFANOVNA)

KROTOVICH, P.P.; CHIKMAREV, K.M.

Wound of the rectum and the urinary bladder penetrating the abdominal cavity. Zdrav. Belor. 6 no. 5:62-63 My '60. (MIRA 13:10)

1. Iz khirurgicheskogo otdeleniya voyennogo gospitalya.
(RECTUM—WOUNDS AND INJURIES) (BLADDER—WOUNDS AND INJURIES)
(ABDOMEN—WOUNDS AND INJURIES)

1. CHIKMAREV. P. T.

2. USSR (600)

4. Rye

7. Sowing winter rye for feed on disked stubble. Korm baza 4 No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

CHIKNAYEV, S.F., inzh.

Improved loading and unloading of coal at the "Severnyi Maganak" coal preparation plant in the Kuznetsk Basin. Obog. i brik. ugl. no.6:42-43 '58. (MIRA 12:7)

1.Uglesobogatitel'naya fabrika "Severnyy Maganak."
(Kuznetsk Basin--Coal preparation)
(Coal-Handling machinery)

B/193/60/000/002/002/013
A004/A001

AUTHORS: Mikadze, I. S.; Chachanidze, O. V.; Gay, A. M.; Chikobava, A. I.

TITLE: Regulating computer for ferroalloy arc furnaces

PERIODICAL: Byulleten' tekhniko-ekonomicheskoy informatsii, no. 2, 1960, 8-10

TEXT: The author describes the design and function of a regulating computer for ferroally arc furnaces, developed by the Tbiliskiy nauchno-issledovatel'skiy institut priborostroyeniya i sredstv avtomatizatsii (Tbilisi Scientific Research Institute of Instrument Making and Automation Equipment) (TNIISA). This computer is intended to control the accuracy of regulators which are to maintain the definite ratio of current to voltage in high-power electric arcs. The computer performs operations of algebraic addition, multiplication and integration. It is composed of building blocks designed for electronic analog computers. The utilization of the computer required the introduction of a measuring current transformer 1 and excitation choke 2 into the circuit of the existing regulator. The latter replaced the autotransformer. For the input of alternating values into the computer, which are proportional to the voltage of the arc - fusion zone measuring voltage transformer 3 is provided. This transformer receives the

Card 1/3

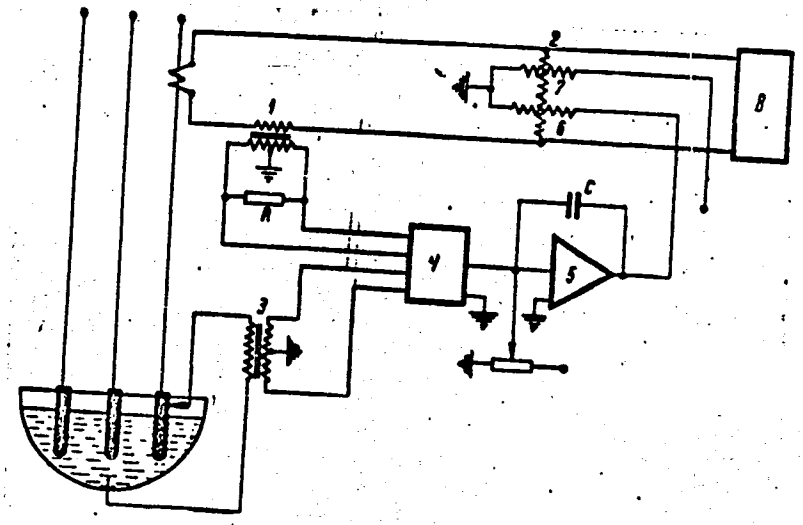
Regulating computer for ferroalloy arc furnaces

voltage acting between the tracer and the electric zero point of the furnace. A steel wire 2-4 mm in diameter is placed in the furnace lining to lead out the electric zero phase. The voltage, proportional to the current phase of the furnace being regulated and to the voltage of the arc - fusion zone, is fed into multiplying block 4. The voltage at the output of the multiplying block is proportional to the power or, at a corresponding switching over, to the square of the current of the furnace phase being regulated. This voltage is supplied to summing integrator 5. The unbalance voltage, forming as a result of summing up, is integrated and acts on control winding 6 of choke 2, thus effecting the integrated correction of the regulator current circuit. Excitation winding 7 of the same choke is intended for the current control in the regulator current circuit. The service tests showed that regulator 8 equipped with a computer increases by 1-2% the accuracy of maintaining the mean current value in the phases and the mean power value in the arc - fusion zone. The author points out that TNIISA has developed a computer for the continuous measurement of the real and reactance resistance in the short circuit. There is 1 figure.

Regulating computer for ferroalloy arc furnace

S/193/60/000/002/002/013
A004/A001

Figure:



Card 3/3

CHIKOBAVA, A. S., PERTSEV, V. N., KOROVIN, YE. P.

Scientific Societies

Results of the 10th session of the Council for Coordination. Vest. AN SSSR, 22, No. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June 1952, Uncl.

2

ZAMTARADZE, V.Sh., kand.tekhn.nauk; CHIKOBAVA, G.Sh., gornyy inzh.

Investigating aerodynamic resistance of longwalls equipped with OMKT complexes and "Mosshass" supports. Ugol' 40 no.5:69-72 My '65. (MIRA 18:6)

CHIKOBAVA, L. L.

"The Rh Factor and Its Practical Importance According to Date Supplied by the Institute of Blood Transfusions of the Georgian SSR." Cand Med Sci, Georgian Sci Res Inst of Blood Transfusions, Tbilisi, 1953. (RZhBiol, No 6, Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No. 521, 2 Jun 55

9(6)

AUTHORS: Chikobava, V. S., Yaskevich, G. N.

SOV/32-25-4-58/71

TITLE: Use of Silver - Carbon Foils for Electron Microscope Investigations (Primeneniye serebryano-ugol'nykh plenok dlya elektronnomikroskopicheskikh issledovaniy)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 4, p 498 (USSR)

ABSTRACT: Silver - carbon foils may be used for studying electron-microscopically the fine structure of nickel alloys. Silver is dusted onto the pickled ground section in a vacuum (10^{-4} mm Hg). The thickness of the silver layer is a few microns, and it can be easily detached. Carbon is then dusted onto this negative silver "print" of the ground section. This is, again, done in the vacuum. This dual-layer silver-carbon foil is then placed into nitric acid, where the silver dissolves and the carbon foil floats up. The latter is then cleaned and studied electron-microscopically. The electron microphotograph of a ZhSZ alloy is given (Fig). There is 1 figure.

Card 1/1

L 12966465 EWT(m)/EPF(c)/EPF(n)-2/ T(t)/EWP(b) Pu-4/Pr-4 GG/JD

ACCESSION NR: AR4044209 S/0137/64/000/006/I021/I021

SOURCE: Ref. zh. Metallurgiya, Abs. 61131

AUTHOR: Natsvlishvili, G. I.; Chikobava, V. S.

TITLE: Influence of neutron irradiation on the decomposition of metallic solid solutions

CITED SOURCE: Tr. In-ta fiz. AN GruzSSR, v. 9, 1963, 159-169

TOPIC TAGS: solid solution, metallic solid solution, decomposition, neutron irradiation

TRANSLATION: The decomposition of supersaturated solid solutions of single- and polycrystalline samples of Al + 4% Cu, and also of polycrystalline samples of Cu + 2.5% Be under the influence of neutron irradiation (to $2 \cdot 10^{9}$ cm^{-2}) is studied by metallographic and electron-microscopic methods, and by measuring the microhardness. In the case of alloys Al-Cu there is no noticeable influence of irradiation. During irradiation of alloy Cu + 2.5% Be there is found the appearance of disperse

Card 1/2

L 12966-65

ACCESSION NR: AR4044209

particles of the γ-phase in an α-solid mother solution. In the case of controlled thermal aging of an unirradiated sample at 200° for 7 hours the microstructure has another form (greater precipitation of the secondary γ -phase). Notes the sharp increase in microhardness after irradiation: from 148±6 to 490±35 for the α-phase and from 530±35 to 870±60 for the γ-phase. The increase in microhardness of the α-phase is explained by the precipitation of disperse particles of the secondary γ-phase, and the increased microhardness of the primary γ-phase is explained by radiation damage.

SUB CODE: SS, NP ENCL: 00

Card 2/2

ABESADZE, P.D.; DOYDZHASHVILI, G.I.; LITVIN, D.F.; LYASHCHENKO, B.G.; PROTOPOPOV, N.N.; CHIKOBAVA, V.S.

Universal apparatus for neutron diffraction structural analysis. Prib. i tekh. eksp. 9 no.2:43-46 Mr-Ap'64. (MIRA 17:5)

1. Institut metallovedeniya i fiziki metallov TSentral'nogo nauchno-issledovatel'skogo instituta chernoy metallurgii imeni I.P. Bardina i Institut fiziki AN Gruzinskoy SSR.

CHIKOIDZE, G. B.

PHASE I BOOK EXPLOITATION SOV/5683

Akademiya nauk Gruzinskoy SSR. Institut elektroniki, avtomatiki i telemekhaniki

Trudy (Academy of Sciences of the Georgian SSR. Institute of Electronics, Automation and Remote Control. Transactions) No. 1. Tbilisi, 1960. 126 p. 500 copies printed.

Ed. A. I. Eliashvili; Deputy Ed.: E. Ualamueridze; Tech. Ed.: A. Thodua.

PURPOSE: This collection of articles is intended for scientists and technical personnel concerned with electronics in general, and machine translations in particular.

COVERAGE: Four out of the nine articles concern machine translation from Georgian into Russian, and vice-versa. Two articles consider general problems of machine translation. The three remaining articles discuss various electronic devices. Articles 1, 3, and 4 are written in Georgian with summaries in Russian. The

Card 1/3

remaining articles are in Russian. No personalities are mentioned. References accompany most of the articles.

TABLE OF CONTENTS:

1. Dameniya, M. Ye. Concerning the Analytical Patterns of the Georgian Language for Machine Translations 3

2. Chikoidze, G. B. Concerning the Algorithm of Russian-Georgian Machine Translation 17

3. Gachechiladze, T. G., and A. I. Eliashvili. Statistics of Two-Letter Combinations for the Literary Georgian Language 25

4. Tsertsvadze, G. N., and T. G. Gachechiladze. Process of Letter Distribution in the Words of the Georgian Language 29

5. Kakauridze, A. G. Some Problems in Coding Vowel Sounds 41

6. Imedadze, V. V., and I. P. Paylodze. Registers and Binary Counters Using Ferrites and Transistors 65

7. Imedadze, V. V., and A. G. Lekvinadze. Analysis of the Operation of a Thyratron Changeover Switch 93

8. Tsintsadze, Sh. A. Investigation of a Low-Power Synchronous Generator as the Object of Voltage Regulation During Simultaneous Variation in the Speed of the Set 105

9. Chakhirov, N. S. Concerning the Problem of Calculating Transients in an Induction Drive With Choke Control 115

AVAILABLE: Library of Congress (TK7800.A45A14)

Card 3/3

JP/rsm/ec
10-28-61

CHIKOIDZE, G.B.

Concerning the algorithm of Russian-Georgian machine translation. Trudy Inst.elek., avtom.i telem. AN Gruz.SSR 1:17-23 '60. (MIRA 14:6)

(Machine translating) (Russian language—Translating)

GACHECHILADZE, T.G.; TSERTSVADZE, G.N.; CHIKOIDZE, G.B.

Concerning the ε-structure of the distribution of omissions.
Trudy Inst.elek., avtom.i telem.AN Gruz. SSR 2:3-16 '61.
(MIRA 14:8)

(Information theory) (Machine translating)

S/748/61/002/000/001/003

AUTHORS: Gachechiladze, T.G., Tsertsvadze, G.N., Chikoidze, G.B.

TITLE: On the ε-structure of the distribution of gaps.

SOURCE: Akademiya nauk Gruzinskoy SSR. Institut elektroniki, avtomatiki i telemekhaniki. Trudy. v. 2. 1961, 3-15.

TEXT: The object of the analytical investigation set forth in this paper is the so-called gaps as defined in Yngve's recent paper (not identified). Following the identification of pairs of elements (words, morphemes, etc.) by some indication, the elements within a text that lie between the fixed elements are regarded as gaps; the frequency with which a certain number of gaps between fixed elements in a text occurs is calculated, and the so-called Yngve histograms are constructed. Having previously employed Yngve's calculation technique, not just for specific words or morphemes as elements, but for certain parts of speech, namely, nouns and verbs, and having calculated the distribution of gaps between the four possible pairs of these two parts of speech, the author presently makes an attempt to describe mathematically the results obtained by the methods of the analysis of gaps. The model employed is described. A text in which the mutually related nouns and verbs intermingle and in which all gaps are marked by dashes, is transformed into a form in which

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On the ε-structure of the distribution of gaps. S/748/61/002/000/001/003

each interrelated noun-verb pair stands separately with all elements lying between the two key elements of the pair marked by dashes. The complex consisting of a noun and the verb nearest to it, together with the dashes located between them, are termed a "word" and the verb and noun standing nearby are termed an "interval between words." The paper studies the distribution of the length of the "words," that is, the number of dashes in a "word." The length of a "word" is affected by the neighboring "words" and the omitted symbols. The method proposed takes this influence into consideration. The mathematical description of the process of formation of the "words" by means of a suitable mathematical model is described. The experimental portion of the paper reports the distribution of the length of "words" of three languages: Russian, Gruzian, German. Inasmuch as the statistic for the latter was found to be fairly inadequate, no theoretical distributions were set up for it. The criterion for the sufficiency of the amount of text digested was judged by the change in the probabilities encountered when an additional (usually 1,000-word) portion of text was added to the results of the preceding investigation. When the oscillations lay within ±1%, the text was regarded as sufficient. The ε spectrum was set up by an experimental calculation of the moments, the value of which was equated to the expression obtained by the mathematical functions derived in the present study. The solution of these equations provided the theoretical distribution. The works of 3 Gruzian authors were analyzed. For the Russian language, the

Card 2/3

On the ε-structure of the distribution of gaps. S/748/61/002/000/001/003

works of 3 authors (A. Fadeyev, A. P. Chekhov, and Kuprin) were analyzed. The 3 German authors analyzed were Thomas Mann, Erich Remarque, and Lion Feuchtwanger. There are 12 tables, showing the numerical results obtained for the 9 authors. There is no list of references, even though an unidentified English-language work by Victor H. Yngve is cited in the text.

Card 3/3

CHIKOIDZE, G. M. (Leningrad K-9, Botkinskaya ul., d. 15, kv. 517)

Surgical treatment of tumors of the apex pulmonis (Pancoast's syndrome). Grud. khir. 4 no.3:98-101 My-Je '62. (MIRA 15:7)

1. Iz khirurgicheskoy kliniki usovershenstvovaniya vrachey No. 1 (nach. - deystvitel'nyy chlen AMN SSSR prof. P. A. Kupriyanov) Voyenno-meditsinskoy ordena Lenina akademii imeni S. M. Kirova.

(LUNGS--TUMORS)

CHIKOLEV, Vladimir Nikolaevich

Selected works on electrotechnics, lighting and projecting technics; with biographical notes and commentaries Leningrad, Gos. energ. izd-vo, 1949. 387 p. (Klassiki russkoi energetiki) (50-31624)

TK4169.C48

USSR/Diseases of Farm Animals - Diseases Caused by Protozoa.

Abs Jour : Ref Zhur Biol., No 5, 1959, 21418

Author : Vecherkin, S.S., Yesikov, V.I., Chikov, A.N.

Inst : Kirgiz Scientific Research Institute of Animal Husbandry and Veterinary Medicine.

Title : The Intramuscular Application of a Citrated Trypaflavine Solution as a Method in the Complex of Measures for Combating Hemosporidiasis in Cattle of Southern Kirgizia.

Orig Pub : Tr. Kirg. n.-i. in-ta zhivotnovodstva i veterinarii, 1957, vyp. 13, 54-59

Abstract : On farms infested with Francis' disease (tularemia) and piroplasmosis (738 heads of cattle), intramuscular injections of the cattle with a citrated solution of trypaflavine in a 5 to 7 percent concentration prepared in a 5 percent sodium citrate solution, cut short the outbreak

Card 1/2

- 25 -

VECHERKIN, S.S., kand.vet.nauk; YESIKOV, V.I., assistent; CHIKOV, A.N., nauchnyy sotrudnik

Intramuscular injection of trypaflavine for hemosporidiosis in cattle. Veterinariia 36 no.3:24-26 Mr '59. (MIRA 12:4)
(Hemosporidia) (Acriflavine)

CHIKOV, A.P.

Preliminary results in controlling fungal diseases in Alma-Ata Province. Zdrav. Kazakh. 22 no.2:7-13 '62. (MIRA 15:4)

1. Iz Alma-Atinskogo oblastnogo kozhno-venerologicheskogo dispansera.
(ALMA-ATA PROVINCE—MYCOSIS)

CHIKOV, A.P.

Use of 4% epilin plaster in the treatment of mycoses of the scalp under rural conditions. Zdrav. Kazakh. 23 no.4:42-44 '63. (MIRA 17:5)

1. Iz Alma-Atinskogo oblastnogo kozhno-ven. roligicheskogo dispansera.

CHIKOV, A.P.

Results of the treatment of trichomycosis with 4% epilin plaster. Vest. derm. i ven. 37 no.6:46-47 Je '63. (MIRA 17:6)

1. Alma-Atinskiy oblastnoy kozhno-venerologicheskiy dispanser.

VIL'CHINSKIY, Yu.; GUBKIN, Ye.; LORATORIN, O.; CHIKOV, B.

Examining the precision of sighting when pointing on different marks. Trudy MIIGAIK no.41:39-46 '60. (MIRA 13:11)

1. Kafedra geodezii Moskovskogo instituta inzhenerov geodezii, aerofotos"yemki i kartografii.
(Triangulation)

CHIKOV, B.M.

Tectonics of the Okhotsk central massif. Geol. i geofiz. no.3:72-83 '65. (MIRA 18:6)

1. TSentral'naya geologo-geofizicheskaya ekspeditsiya, poselok Khasyn.

CHIKOV, B.M.

Transverse faults as revealed by a study in the Koryak fold area. Dokl. AN SSSR 161 no.6:1397-1399 Ap '65. (MIRA 18:5)

1. TSentral'naya geologo-geofizicheskaya ekspeditsiya Severo-Vostochnogo geologicheskogo upravleniya. Submitted November 20, 1964.

VAL'SHCHIKOV, N.M.; DOBROVOL'SKIY, P.P.; CHIKOV, I.I.

Newest types of chippers. Bumagoedel. Mash. no.11:124-148 '63.
(MIRA 17:6)

CHIKOV, M.

Apropos of the article "Sore subjects." Prom.koop. no.4:9-10 Ap '57. (MLRA 10:7)

1. Zamestitel' predsedatelya pravleniya Rospromsoveta.
(Disabled--Employment)

CHIKOV, O.I., (Engr-Col)

Listed as a member of the editorial staff of Tankist . Author of article,p" Prepare Yourself in Time for the Use of Armored Equipment Under Summer Conditions," concerning the maintenance of tank and armored equipment in the summer camp. (Tankist, Moscow, No 4 Apr 54)

SO: SUM No. 239, 13 Oct. 1954

CHIKOV, G., inzhener-polkovnik.

Means for servicing tanks. Tankist no.5:34-37 My '56. (MIRA 11:3)
(Tanks (Military science)--Maintenance and repair)

CHIKOV, O., inzh.-polkovnik.

Getting tanks ready for summer operation. Tankist no.3:42-46 Mr '58.
(Tanks (Military science)--Maintenance and repair) (MIRA 11:5)

CHIKOV, P.A., kapitan

They kept their word. Vest.protivovozd.obor. no.1:13-14 Ja '61.
(MIRA 14:2)
(Antiaircraft artillery)

CHIKOV, P.S.

Machine and melioration stations as a decisive factor in the improvement of meadows and pastures. Gidr. i mel. 17 no.8: 44-48 Ag. '65. (MIRA 18:10)

1. Sekretar' Tyumenskogo oblastnogo komiteta Kommunisticheskoy partii Sovetskogo Soyuza.

1. CHIKOV, P. V.

2. USSR (600)

4. Tobacco - Abkhazia

7. Winter preparatory work to growing seedling by leading tobacco growers of Abkhazia. Tabak 13 no. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

CHIKOV, V., assistent

Over-all mechanization of meat processing sections. Obshchestv. pit. no.11:35-36 N '59. (MIRA 13:3)
(Restaurants, lunchrooms, etc.)

CHIKOV, V., inzh. (Leningrad)

Potentiality for lowering production costs. Obshchestv.pit. no.5:55 My '62. (MIRA 15:5)
(Salvage (Waste, etc.)) (Restaurant management)

CHIKOV, V.M.; NEVOLIN, F.V., kand. tekhn. nauk; TIPISEVA, T.G., inzh.

Use of synthetic detergents in dishwashing. Masl.-zhir. prom. 29 no.3:36-37 Mr '63. (MIRA 16:4)

1. Leningradskiy institut sovetskoy torgovli imeni F. Engel'sa (for Chikov). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov (for Nevolin, Tipiseva).
(Cleaning compounds)
(Dishwashing machines)

CHIKOV, V. V.

CHIKOV, V. V. -- "Changes in the Gonads Developing under the Influence of Testosterone Propionate and Sinestrol." Leningrad, 1956. (Dissertation for the Degree of Candidate in Medical Sciences).

So.: Knizhnaya Letopis', No. 8, 1956.

CHIKOV, V.V., kand.med.nauk

Late perforation of the bladder by a migrating foreign body.
Urologiia 23 no.5:66-67 S-O '58 (MIRA 11:11)

1. Iz urologicheskogo otdeleniya (nauchnyy rukovoditel' - doktor meditsinskikh nauk G.S. Grebenshchikov) Leningradskoy bol'nitsy imeni Kuybysheva.
(BLADDER, perforation
late p rf. by migrating for. body (Rus))

1. CHIKOV, Ya. I. PIYR, A.I.

2. USSR (600)

3. Hoisting Machinery

4. Loading winch with drive from the automobile wheels. Les. Prom. No. 11 - 1952.

9. Monthly List of Russian Acessions, Library of Congress, February, 1953. Unclassified.

CHIKOV, Yakov Ivanovich; PIIR, Aleksandr Ivanovich; KARAVASHKIN, S.I., redaktor; GORYUNOVA, L.K., redaktor; SMITS, V.P., tekhnicheskiy redaktor.

[Trucking of lumber on interchangeable trailers] Avtomobil'naia vyvozka lesa na [illegible] pritsepakh. Moskva, Goslesbumizdat, 1956. 49 p. (MLRA 9:5)
(Automobiles, Trucks) (Lumber--Transportation)

CHIKOV, Ya.I.

DOROKHOV, B.A., red.; ZAKHAREVICH, B.G., red.; IVANOV, A.S., red.; SEMENOV, S.M., red.; CHIKOV, Ya.I., red.; SHCHIGLOVSKIY, B.M., red.

[Technical section for catalogs of uniform estimates of construction work and costs, in effect as of July 1, 1955, for structures of the second group of the Ministry of the Lumber Industry of the U.S.S.R.; for all territorial districts] Tekhnicheskaia chast' k katalogam edinichnykh rastsenok na stroitel'nye raboty v tsenakh, vvedennykh s 1 iiulia 1955 goda dlia stroek vtoroi gruppy Ministerstva lesnoi promyshlennosti SSSR (dlia vsekh territorial'nykh raionov). Leningrad, 1957. 222 p. (MIRA 10:12)

1. Russia (1923- U.S.S.R.) Ministerstvo lesnoy promyshlennosti. Upravleniye kapital'nogo stroitel'stva.
(Construction industry--Costs)

CHIKOV, Yakov Ivanovich; GATSKEVICH, V.A., red.; PINSKAYA, M.Z., red. izd-va; BACHURINA, A.M., tekhn. red.

[Combined lumbering and wood processing enterprises]Kompleksnye lesozagotovitel'nye predpriiatiia s pererabotkoi drevesiny. Moskva, Goslesbumizdat, 1960. 63 p. (MIRA 16:2)
(Wood-using industries)

SOV/124-57-9-10829

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 9, p 142 (USSR)

AUTHORS: Gastev, V. A., Chikov, Ye. A.

TITLE: An Investigation of the Behavior of Bars Subjected to Combined Compressive and Flexural Stresses Under Periodic Loading (Issledovaniye szhatoizognutykh sterzhney pod deystviyem periodicheskikh nagruzok)

PERIODICAL: V sb.: 15-ya nauchn. konferentsiya Leningr. inzh.-stroit. in-ta, Leningrad, 1957, pp 353-356

ABSTRACT: The authors evolve approximate expressions for the stresses and permissible frequency-variation ranges for the case of a transversely vibrating uniform bar freely supported at both ends and subjected to the action of two periodic forces, the one longitudinal, the other transverse.

V. V. Bolotin

Card 1/1

CHIKOV, Ye. A.: Master Tech Sci (diss) -- "On oscillations and stability of rods under the influence of linear and cross-sectional periodic forces". Leningrad, 1958. 12 pp (Min Higher Educ USSR, Leningrad Order of Labor Red Banner Construction Engineering Inst, Chair of "Strength of Materials"), 100 copies (KL, No 5, 1959, 152)

DOROKHOV, B.A., red.; ZAKHAREVICH, B.G., red.; IVANOV, A.S., red.; SEMENOV, S.M., red.; CHIKOV, Ye.I., red.; SHCHIGLOVSKIY, B.M., red.

[Catalog of standard estimates for construction work at prices set as of July 1, 1955, for buildings of the second group administered by the Ministry of the Lumber Industry of the U.S.S.R., located in Molotov and Sverdlovsk provinces, the 11th territorial district of the U.S.S.R.] Katalog edinichnykh rastsenok na stroitel'nye raboty f tsenakh, vvsedennykh s 1 iiulia 1955 goda dlia stroek vtoroi gruppy Ministerstva lesnoi promyshlennosti SSSR, raspolozhennykh v Molotovskoi i Sverdlovskoi oblastiakh 11-go territorial'nogo raiona Soiuza SSR. Leningrad. Book 1. 1957. 91 p. Book 2. 1957. 95 p. Book 3. 1957. 99 p. (MIRA 10:12)

1. Russia (1923- U.S.S.R.) Upravleniye kapital'nogo stroitel'stva. (Building--Estimates)

CHIKOV, Ye. I.

DOROKHOV, B.A., red.; ZAKHAREVICH, E.G., red.; KANOV, A.S., red.; SEMENOV, S.M., red.; CHIKOV, Ye.I., red.; SHCHIGLOVSKIY, B.M., red.

[Catalog of standard estimates for construction work at prices set as of July 1, 1955, for buildings of the second group administered by the Ministry of the Lumber Industry of the U.S.S.R., located in Altai Territory, Kemerovo, Novosibirsk, Omsk and Tomsk provinces and Tyumen Province (south of the 64th parallel), the 18th territorial district of the U.S.S.R.] Katalog edinichnykh rastsenok na stroitel'nye raboty v tsenakh, vvedennykh s 1 iiulia 1955 goda dlia stroek vtoroi gruppy Ministerstva lesnoi promyshlennosti SSSR, raspolozhennykh v Altaiskom krae, Kemerovskoi, Novosibirskoi, Omskoi, Tomskoi oblastiakh i Tiumenskoi oblasti (iuzhnee 64 paralleli) 18-go territorial'nogo raiona Soiuza SSR. Leningrad. Book 1. 1957. 111 p. Book 2. 1957. 107 p. Book 3. 1957. 139 p. (MIRA 10:12)

1. Russia (1923- U.S.S.R.) Upravleniye kapital'nogo stroitel'stva. (Building--Estimates)

VASIL'YEV, A.; VOLOKITIN, A.; TSELYKOVSKIY, P.; LOTOREV, D.; GAGLOYEVA, N.; KRYUKOVA, T.; CHIKOVA, N.

Second edition of a handbook on the economics of Soviet trade ("Economics of Soviet trade." Reviewed by A. Vasil'ev and others). Sov.torg. 33 no.6:62-64 Je '60. (MIRA 13:7)

1. Prepodavateli kafedry ekonomiki Leningradskogo instituta sovetskoy torgovli.

(Russia--Commerce)

BELYAYEV, I.N.; CHIKOVA, N.N.

System Li_2SO_4 - Cs_2SO_4 - $PbSO_4$. Zhur. neorg. khim. 9 no.3: 756-758 Mr '64. (MIRA 17:3)

BELYAYEV, I.N.; CHIKOVA, N.N.

Ternary systems K_2SO_4 - Li_2SO_4 - Cs_2SO_4 and Li_2SO_4 - Rb_2SO_4 - $PbSO_4$. Zhur. neorg. khim. 8 no.6:1442-1449 Je '63. (MIRA 16:6)

(Alkali metal sulfates)
(Lead sulfate)

BELYAYEV, I.N.; CHIKOVA, N.N.

Systems of chromates, molybdates, and tungstates of rubidium, cesium, and lead. Zhur. neorg. khim. 9 no.12:2754-2760 D '64. (MIRA 18:2)

CHIKOVA, N. S. Capt

PA 31/49T51

USSR/Medicine - Lungs, Suppuration Jul/Aug 48
Medicine - Pneumonia, Diagnosis

"Types of Suppurative Pneumonia That Can Be Clinically and Roentgenologically Diagnosed," Capt N. S. Chikova, Med Corps, Lt Col G. I. Burchniskiy, Med Corps, Cand Med Sci, Kiev Okrug Mil Hosp, 11 pp

"Terapev Arkhiv" Vol XX, No 4

Divides pulmonary suppurations into four classes and describes features of each. Includes five illustrations, and two tables.

[redacted]

31/49T51

CHUKOVA, V. M:

"The Sevanskiy Barbel, Barbus goktschaicus Kessler (Its Classification, Biology, and Commercial Potential)." Cand Biol Sci, Acad Sci Armenian SSR, Yerevan, 1953. (RZhBiol, No 2, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (13) SO: Sum. 508, 29 Jul 55

CHIKOVA, V.M.

The Sevan barbel Barbus goktschaicus Kessler (systematics, biology, and fisheries). Trudy Sevan.gidrogiol.sta. 14:121-163 '55. (MLRA 9:8)

(Sevan, Lake--Barbel)

MARKOSYAN, A.K.; CHIKOVA, V.M.

Carp of Arpalich Lake. Trudy Sevan.gidrogiol.sta. 14:197-208 '55. (MLRA 9:8)

(Arpalich Lake--Carp)

CHIKOVA, V.M.

Oxygen requirement of Lake Sevan barbel. Izv. AN Arm. SSR Biol. i sel'khoz. nauki 10 no.1:77-78 Ja '57. (MIRA 10:4)

1. Sevanskaya gidrobiologicheskaya stantsiya Akademii nauk Armyanskoy SSR.

(SEVAN, LAKE--BARBEL(FISH)) (OXYGEN--PHYSIOLOGICAL EFFECT)

CHIKOVA, V.M.

Status of the stocks of Varicorhinus capoeta sevangi Fil. according to the observations of 1948-1955. Trudy Sevan. gidrobiol. sta. 15: 235-247 '57. (MLRA 10:8)

(Sevan, Lake--Carp)

CHIKOVA, V.M.

Stock of Varicorhinus in Lake Sevan in 1956-1958. Trudy Sevan. gidrobiol. sta. 16:115-123 '62. (MIRA 16:3)
(Sevan, Lake--Varicorhinus)

CHIKOVANI, A.A.

Study of the tectonics of the northern periphery of the Imeretian Range in connection with oil potential. Trudy VNIGNI no.15:112-142 '59. (MIRA 14:6)

(Imeretian Range--Petroleum geology)

CHIKOVANI, A.A.

Stratigraphy and facies of Tertiary sediments in the northern periphery of the Dzirul'skiy Massif. Trudy Geol.inst. AN Gruz.SSR.Geol.ser. 12:79-102 '61. (MIRA 15:9)
(Sachkhere District--Geology, Stratigraphic)
(Chiatura region--Geology, Stratigraphic)

CHIKOVANI, A.A.

Some new and little known Middle Miocene bivalves. Trudy Geol.inst. AN Gruz.SSR. Geol.ser. 13:197-207 '63. (MIRA 16:9)

CHIKOVANI, B.V.

Calculation of the thermal stability of a resistor in the circuit of a pulse voltage generator. Trudy GPI no.5:69-76 '63.

Analysis of the idle operation of a pulse voltage generator taking into account installed parasitic components. Ibid.:77-84
(MIRA 17:9)

L 10838-67 EWT(1)/FCC GW

ACC NR: AR6032355 SOURCE CODE: UR/0169/66/000/007/A052/A052

AUTHOR: Abuladze, N. B.; Khocholava, G. M.; Chikovani, D. S.

TITLE: Some parameters of type Sc geomagnetic storms

SOURCE: Ref. zh. Geofizika, Abs. 7A317

REF SOURCE: Sb. Nekotoryye vopr. issled. elektromagnitn. polya Zemli, no. 1(23), Tbilisi, Metsniyereba, 1965, 46-51

TOPIC TAGS: storm, magnetic storm, geomagnetic storm, anomalous absorption, polar cap, geomagnetic latitude

ABSTRACT: Some parameters of fluxes for magnetic storms following anomalous absorption in the polar cap (AAPC) were investigated on the basis of data obtained at the Dusheti Magnetic Observatory and the ionospheric data for the IGY. These parameters are compared with the parameters of usual fluxes. Also, AAPC dynamism in the period of the development of a geomagnetic storm was studied. On the basis of the condition that the energy density of the corpuscular flux at the boundary of the magnetosphere and that of the geomagnetic field are equal, the authors derive a formula connecting the magnetospheric radius R with the increase

UDC: 550.385.4

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L 10838-67

ACC NR: AR6032355

of the geomagnetic field and on the equator into the initial stage of storm ΔH. R and flux densities n are calculated for various storms. It is concluded that in comparison with ordinary storms, the storms correlated with AAPC have a larger R and a lower n. It is stated that denser fluxes possess more intensive magnetic fields. It is noted that there is a divergence between theoretical and experimental values of the geomagnetic latitude of the external zone of anomalous absorption. This divergence is especially noticeable at the moment of the highest geomagnetic field depression. I. Kovalevskiy. [Translation of abstract]

SUB CODE: 08/

Card 2/2 bpp

KVAVADZE, D.K.; CHIKOVANI, Dzh.S.; TABIDZE, B.A.

Oblique incidence of electromagnetic waves on a periodical wire grid. Trudy Inst. geofiz. AN Gruz. SSR 19:27-37 '60. (MIRA 14:9)
(Electromagnetic waves)

KVAVADZE, D. K.; CHIKOVANI, D. S.; KHUNDZHUA, T. G.

Experimental study of the reflection of electromagnetic waves from a system consisting of slatted vylindrical waveguides. Trudy Inst. geofiz. AN Gruz. SSR 20:27-35 '62.
(MIRA 16:1)

(Wave guides) (Microwaves)

USSR.

1229. Some examples of the decay of *V*-particles. G. E. Chikovani, Z. Sh. Mandzhavidze, L. D. Chikovanishvili and M. E. Bibilashvili. Letter in *Zh. eksper. teor. Fiz.*, 26, No. 4, 505-6 (1954) In Russian.

In 1800 photographs taken at 3900 m with a cloud chamber in a field of 6800 gauss under 20 cm Pb, and activated by systems of counters responding to penetrating showers, 4 *V*-events were found. The 1st is the decay of a $2400 \pm 200 m_e$ V^0 into a proton (1·44 BeV/c) and negative meson (0·4 BeV/c). The coefficient $\alpha \equiv (p_+^2 - p_-^2)/p_+^2$ is 0·61. The 2nd is probably $V^0(667 \pm 70 m_e) \rightarrow \pi^+(0{\cdot}12\ \mathrm{BeV/c}) + \pi^-$ (0·34 BeV/c) with $\alpha \approx -0{\cdot}51$. The other 2 cases show changes of direction of 120° in a 0·4 BeV/c negative, and 36° in a 0·63 BeV/c positive track, respectively, and can be interpreted as decays of V^+.

W. J. SWIATECKI

USSR/Nuclear Physics - Statistics FD-744

Card 1/1 : Pub 146-14/22

Author : Chikovani, G. Ye.

Title : Statistical method for determining the masses of unstable neutral particles and their decay products

Periodical : Zhur. eksp. i teor. fiz., 27, 110-111, Jul 1954

Abstract : Letter to the editor. Investigates the masses +m and -m of decay products of neutral V^0 particles and finds by statistical method the mean error to be $\pm 6m_e$. 4 foreign references.

Institution : Institute of Physics, Acad Sci Georgian SSR

Submitted : January 19, 1954

CHIKOVANI, G. Ye.

"Distribution of charged particles in electron nuclear showers according to their momentums," L. D. Gedevanishvili, Z. Sh. Mandzhavidze, N. N. Roinishvili, E. I. Tsagareli, A. I. Tsintsabadze, and G. E. Chikovani; Bull. Acad. Sci. USSR, Phys. Ser. 6, 677-8 (1955) (English Translation). -- See C.A. 50, 7618e.

GEDEVANISHVILI, L.D.; MANDZHAVIDZE, Z.Sh.; ROYNISHVILI, N.N.; TSAGARELI, E.I.
TSINTSABADZE, A.I.; CHIKOVANI, G.Ye.

Pulse distribution of charged particles in electronic and nuclear showers. Izv. AN SSSR. Ser. fiz.19 no.6:748-749 N-D '55.(MIRA 9:4)

1.Institut fiziki AN Gruz.SSR i Tbilisskiy gosudarstvennyy universitet imeni I.V.Stalina.
(Cosmic rays) (Nuclear physics)

CHIKOVANI, G.YE.

120-3-18/40

AUTHORS: Mandzhavidze, Z.Sh. and Chikovani, G.Ye.

TITLE: Stabilization of the Supply Current to an Electromagnet. (Stabilizatsiya toka pitaniya elektromagnita)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1957, Nr 3, pp.69-71 (USSR)

ABSTRACT: An electronic stabilizing circuit is described which stabilizes currents to within ±0.2% up to 300 A, when the input voltage varies by ±20% and the load by +50%. Fig.1 shows the circuit. The input element is a 200 A, 100 mV shunt connected in series with the load. The voltage from the shunt is applied to a potentiometer, the other arm of which is connected to a Weston element (cell). By varying the ratio of the resistances of the potentiometer, the potential between A and Б can be made zero for any given current, I_o through the electromagnet windings. If the current increases, then a negative difference potential develops across А and Б . If the current decreases, the potential is positive. The difference potential is chopped by the vibrator РП-4, which is driven by 50 c/s, 6 V. The chopped signal is amplified in the two stages of the valve 6H9 and passed to the grid of the 6Ж8. With

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Stabilization of the Supply Current to an Electromagnet.

square signals on the 6N3 grid, a sinusoidal voltage appears across TpI. The amplitude depends on the magnitude of the input signal. The sinusoidal voltage is either in phase or 180° out of phase with the 50 c/s supply to PT-4 depending on the polarity of the input signal. This reference frequency is applied via TpII to the phase sensitive detector - the double triode 6X6. With no input signal, the potentiometer R14 is set so that there is no voltage across D and E. With increase of magnet current D goes negative with respect to earth and with decrease of current, positive. The detected signal is applied to the grid of the last valve 6P9, in the anode circuit of which is connected the control winding of the electro-dynamic amplifier EMY-12A. The output of this amplifier feeds the control winding of the DC generator PH-400. The procedure for setting up the circuit is given, followed by a short analysis of the circuit. To obtain maximum stabilization, it is necessary to work with a gain greater than the critical gain. The relaxation oscillations which arise at

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Stabilization of the Supply Current to an Electromagnet.

the critical condition are suppressed by introduction of 1st derivative negative feedback. G. N. Muskhelishvili and O. A. Kancheli helped in this work. There is 1 figure and 6 references, 4 of which are Russian and 2 English.

ASSOCIATION: Institute of Physics AS Gruzinskiya SSR (Institut fiziki AN Gruzinskoy SSR)

SUBMITTED: December 29, 1956.

AVAILABLE: Library of Congress.

Card 3/3 1. Electromagnet current-Stabilization 2. Electronic circuit-Stabilizer

Chikovani, G.Ye.

AUTHORS: Mandzhavidze, Z.Sh., and Chikovani, G.Ye. 120-6-6/36

TITLE: A Double Rectangular Wilson Chamber for the Observation of Unstable Heavy Particles (Pryamougol'naya sdvoyennaya kamera Vil'sona dlya nablyudeniya nestabil'nykh tyazhelykh chastits)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1957, No.6, pp. 30 - 33 (USSR)

ABSTRACT: The chamber was constructed in 1954 for the Academy of Sciences of the Georgian SSR and the Tbilisi State University. The object was to observe hyperons and heavy mesons produced in absorbers placed both directly above the chamber as well as inside it. The chamber works in a magnetic field of 4 500 Oe. It consists of two independent chambers with a dividing chamber between the working volumes. The working volumes and the chamber between them are in an all-metal three-sectional body while the expansion device isplaced in a two-section massive base. Such a system is convenient for the following reasons: 1) the walls of the middle chamber act as the thermal screen because they are part of the massive body of the chamber and have good thermal conductivity. Absorbers placed in this chamber do not affect the thermal regime and do not lead to an

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A Double Rectangular Wilson Chamber for the Observation of Unstable Heavy Particles.

additional distortion of track curvature which is often observed when absorbers are put directly into the chamber (Ref.1); 2) Counters can be placed (if necessary) in the middle chamber; 3) The use of separate chambers placed one above the other (Ref.2) is not always convenient. Constructional details of the chamber are shown in Fig.1. The soft, iron body is divided into three sections by means of partitions made of brass and 6 mm thick. The two extreme sections form the working volumes of the chamber with an illuminated volume of 280 x 106 x 100 mm^3 each. In the dividing compartment formed by the middle section one can place various absorbers. Suitable glass windows are placed in the walls of the chamber. All the internal parts were nickel-plated. In order to remove distortions due to convection currents, the chamber is specially thermostatted to about 1/100th of a degree Centigrade. The working cycle of the chamber is fully automatic. Control measurements have shown that the curvature of μ meson tracks is in agreement with the calculations in Ref.4. The following persons collaborated: E.L. Andronikashvili, L.D. Gedevanishvili, R.I. Dzidziguri, A.A. Kozlov,

120-6-6/36

A Double Rectangular Wilson Chamber for the Observation of Unstable Heavy Particles.

D.M. Kotlyarevskiy, N.N. Roynishvili, A.I. Tsintsabadze, V.D. Tsintsadze and P.A. Novik.

There are 4 diagrams, 4 references, 1 of which is a Slavic translation from English.

ASSOCIATION: Physics Institute of the Ac.Sc. Georgian SSR (Institut Fiziki AN Gruz. SSR)
Tbilisi State University im. I.V. Stalin (Tbilisskiy Gosudarstvennyy Universitet im. I.V. Stalina)

SUBMITTED: December 29, 1957.

AVAILABLE: Library of Congress

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CHIKOVANI, G.Ye.

Multiple scattering of charged particles in the gas of the Wilson chamber. Soob. AN Gruz. SSR 19 no.3:267-272 S '57. (MIRA 11:5)

1. Akademiya nauk Gruzinskoy SSR, Institut fiziki, Tbilisi. Predstavleno akademikom E.L. Andronikashvili.
(Cloud chamber)

CHIKOVANI, G. Ye.

AUTHOR: MANDZHAVID Z E,Z.SH., ROYNISHVILI ,N.N., CHIKOVANI,G.Ye. 56-7-61/66

TITLE: Observation of the Anomalous Decay of Charged Particles in the Wilson Chamber. (Nablyudeniye anomalnogo raspada zaryazhennoy chastitsy v kamere Vilsona, Russian)

PERIODICAL: Zhurnal Eksperim. i Teoret.Fiziki, 1957, Vol 33, Nr 7, pp 303-303 (U.S.S.R.)

ABSTRACT: A slow particle with a more than 20-fold ionisation enters the WILSON chamber (observation took place in the Elbrus Laboratory) and decays, on which occasion it emits a positive particle with a momentum of 352^{+94}_{-61} MeV/c at an angle of 95°. At present it is presumed that the decay of a particle which is heavier than a K-meson, was observed. (With 1 Illustration).

ASSOCIATION: Physical Institute of the Georgian Academy of Sciences of the U.S.S.R. (Institut fiziki Akademii nauk Gruzinskoy S.S.R.

PRESENTED BY:

SUBMITTED: 19.4.1957

AVAILABLE: Library of Congress

Card 1/1

AUTHORS: Mandzhavidze, Z. Sh., Roynishvili, N. N., Chikovani, G. Ye. SOV/56-34-5-9/61

TITLE: The Observation of the Decays of Charged Particles in a Double Cloud Chamber (Nablyudeniye raspadov zaryazhennykh chastits v sdvoyennoy kamere Vil'sona)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol. 34, Nr 5, pp. 1110-1115 (USSR)

ABSTRACT: This paper analyzes 10 decays of heavy charged particles. These particles were observed by means of a device which is similar to the device of C.H. Jork et al. (Ref 2). Investigations were carried out in the Vysokogornaya El'brusskaya kosmicheskaya laboratoriya (El'brus High Mountain Cosmic Laboratory). For the measurements discussed in this paper a rectangular double cloud chamber was used. This cloud chamber consists of two independent volumes (each of them has the dimensions 280x100x110 mm) and three sections for the absorber. The two independent volumes are united by the same carcass. The cloud chamber was filled with argon (1000 torr) and a mixture of 70 % ethyl alcohol and 30 % water was used as condensate. The first series of experiments was carried out with copper ab-

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sorbers, the second with lead absorbers. The magnetic field strength in the working volume had the value 4300 Oe. 11559 photographs were taken within 2836 hours, and 2269 penetrating showers were recorded by these photographs. Moreover, 10 forked tracks were observed on these photographs, they may be interpreted as $V^{\pm}$-decays. The authors found also 22 V^{0}-decays. 1 decay of a τ^{+}-meson, 1 decay of 2 pions (while they were moving) and 13 stars. The results of the measurements of the momenta, angles and the approximate values of the ionization are compiled in a table. All the observed decays, (with the exception of one), taking account of the observation errors, lie within the allowed range for hyperons and K-mesons. Only one case can be exactly interpreted as the decay of a K-meson, for all the other cases it is impossible to discern between K - and Y - decays. Among the decay products no proton was found. The $V^{\pm}$-decays, are divided into two groups, according to the character of production. The 6 particles of the first group have a very low ionization caused by the primary particles. The second group consists of 4 slow particles with rather a high ionization. These 4 particles are not con-

nected with a visible interaction and are generated far from the place of the decay. One decay is interpreted as the decay of a particle which is heavier than a K-meson. It is possible to assume that this particle is the charged analogon of the neutral meson the decay of which was observed by Kovan (Ref 12).
The authors thank Professor E.L. Andronikashvili for supervising these investigations, and also the collaborators of the Tbilisskiy gosudarstvennyy universitet (Tbilisi State University), L.D. Gedevanishvili and E.I. Tsagareli, and also the collaborators of the Institut fiziki (Physics Institute) R.I. Dzidziguri, A.I. Tsintsabadze, V.D. Tsintsadze. There are 4 figures, 3 tables, and 13 references, 5 of which are Soviet.

ASSOCIATION: Institut fiziki Akademii nauk Gruzinskoy SSR (Physics Institute AS Georgien SSR) Tbilisskiy gosudarstvennyy universitet (Tbilisi State University)

SUBMITTED: April 19, 1957

The Observation of the Decays of Charged Particles in a Double Cloud Chamber SOV/56-34-5-9/61

1. Particles--Decay 2. Cloud chambers--Applications 3. Cloud chambers--Performance 4. Particles--Photographic analysis

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CHIKOVANI, G. E.

OBSERVATION OF HEAVY NON-STABLE PARTICLES IN PENETRATING COSMIC RAY SHOWERS
Z.S. Mandzhavidze, N.N. Roinishvili, G.E. Chikovani

The production of heavy non-stable particles was studied in a magnetic field cloud chamber controlled by penetrating showers. 139 $V^{\pm}$ and 34 $V^{\pm}$ - particles were observed.

On the basis of the obtained data, the existence of "forward-backward" asymmetry of disintergration products is considered. The lifetimes for Λ°, Θ° and $\Sigma^{\pm}$ - hyperons are determined. The value obtained for $\tau_{\Sigma^{\pm}}$ agrees with the preliminary estimation given in JETP V. 34, 1,110, 1958 and does not contradict the results obtained with accelerators (Proceedings of the 8th Rochester Conference).

The value for the Λ° particle lifetime, determined for all the cases observed agrees with known cosmic data and is therefore larger than the time $\tau_{\Lambda^{\circ}}$ obtained with accelerators. At the time, for those cases which correlate with the visible point of shower generation, the value obtained for $\tau_{\Lambda^{\circ}}$ proves to be closer to the value obtained with accelerators. An explanation is given for the difference existing between the value of the Λ°-particle lifetime determined by cosmic data and that obtained with accelerators.

Report presented at the International Cosmic Ray Conference, Moscow, 6-11, July 1959

CHIKOVANI, G. Ye., Cand Phys-Math Sci -- (diss) "Lifetime, Λ^{o}, of hyperons generated by cosmic rays." Tbilisi, 1960. 14 pp; (Tbilisi State Univ im I. V. Stalin); 150 copies; free; bibliography on pp 13-14 (22 entries); (KL, 17-60, 140)

S/[illegible]/000/[illegible]

AUTHOR: Chikovani, G. Ye.

TITLE: The lifetime of Λ^0-hyperons generated by cosmic rays.

SOURCE: Akademiya nauk Gruzinskoy SSR. Institut fiziki. Trudy, v. 7, 1960, 147-196 (In Russian).

TEXT: This is a report on laboratory experiments to resolve the hitherto moot question of the lifetime of cosmic-ray-generated Λ^0-hyperons. There is a seemingly irreconcilable difference between the weighted average of values obtained in the past with cosmic-ray particles ($3.5 \cdot 10^{-10}$ sec) and with accelerator-produced particles ($2.5 \cdot 10^{-10}$ sec). If that difference is attributable to differences in the mean interaction energy attending the birth of the strange particles in cosmic rays and in an accelerator, then it should be possible to obtain the accelerator figure from the cosmic-ray figure by eliminating those Λ^0-hyperon decays in which the decay plane and the Λ^0-hyperon-generation point are not coplanar. An analysis of published works shows, however, that the figure of $3.5 \cdot 10^{-10}$ sec expresses the lifetime of those cosmic-ray generated Λ^0-hyperons for which the condition of complanarity is satisfied. Additional measurements appeared desirable. The test setup was similar to that cited in Kim, Y. R., et al., Phys. Rev., v. 96, 1954, 229, and elsewhere, comprising a Wilson chamber placed in a 450-oe magnetic

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The lifetime of Λ^0-hyperons generated . . S/749/60/00?/000/008/012

field. A schematic view of the test setup and a block diagram of the shower-selection array are shown. The impulse of the particles was determined from the curvature of their traces in the magnetic field, determined by the coordinate method and the optical-compensation method. Control measurements were made with hard μ-mesons to determine the effect of convection currents in the gas of the chamber on the impulse of the relativistic particles. 3870 hours of testing, at 1800 m above msl, yielded 8700 photographs of penetrating showers. The statistical processing of the results is discussed in detail, also the method of identifying Λ^0-meson decays as against θ^0-meson decays, provided the impulses are not too great or the decay traces too short. The determination of the "most probable" lifetime in Bartlett's form (Phil. Mag., v.44, 1953, 249) was based on the determination, from the experimental data, of the "apparent" times and distances and the "potential" observation times and distances determined in the rest system of the decaying particle. The analytical method is explained in detail. The lifetime found for all cases of identified Λ^0-decay is $3.02^{+1.14}_{-0.72} \cdot 10^{-10}$ sec, whereas that of the Λ^0-hyperon decays correlated with visible interaction in the chamber is $2.64^{+1.56}_{-0.74} \cdot 10^{-10}$ sec. The error assessment is justified in detail, and, while the difference between the two aforestated lifetime figures is statistically insignificant, the first figure (65 particles) is regarded as statistically better founded than the second (33 particles). Past ex-

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The lifetime of Λ^o-hyperons generated ... S/749/60/007/000/008/012

perimental data are re-analyzed with reference to the methods employed to identify the particles, i.e., whether by correlation with visible interaction or by impulse and angle measurements of the decay products. Systematic errors are carefully eliminated. Separate examination of the correlated cases, in which the noncorpuscularity cannot have been more than perhaps 1-2%, shows a lifetime that is not appreciably different from that obtained for all cases; it is reasonable to conclude that Λ^o formation from the decay of other particles (e.g., Ξ^o) in cosmic rays cannot have been so substantial as to explain the different results obtained hitherto in cosmic-ray and accelerator experiments. The systematic errors found in a number of earlier cosmic-ray experiments, however, are so great, that their elimination reduces the weighted average of past test results to a value of $3.10^{+0.48}_{-0.37} \cdot 10^{-10}$ sec, which accords well with the newly found lifetime. An assessment of the upper limit of the probability of Ξ^o-hyperon generation in cosmic rays, based on the new cosmic-ray Λ^o-hyperon value of $3.08 \cdot 10^{-10}$ sec (weighted mean of all reliable past tests plus the present test) and the accelerator value of $2.5 \cdot 10^{-10}$ sec, yields the conclusion that if the entire difference between the cosmic-ray results and the accelerator results is attributable to the presence of Λ^o-hyperons that are products of Ξ^o-hyperon decay, then the number of Ξ^o-hyperons born in the interaction is at most 0.06 of that of the Λ^o-hyperons born in the same interaction. There are 20

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The lifetime of Λ^0-hyperons generated ... S/749/60/000/008/012

figures, 5 tables, and 60 references (18 Soviet and 42 English-language).

ASSOCIATION: None given.

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S/058/62/000/006/013/136
A061/A101

AUTHORS: Mandzhavidze, Z. Sh., Roynishvili, N. N., Chikovani, G. Ye.

TITLE: Angular distribution of Λ^0-hyperon decay products

PERIODICAL: Referativnyy zhurnal, Fizika, no. 6, 1962, 33, abstract 6B228 ("Tr. In-ta fiz. AN GruzSSR", 1960, v. 7, 193 - 195, English summary)

TEXT: If, in strong interactions with the participation of strange particles, parity is not conserved, this may manifest itself in the presence of "forward-backward" asymmetry in Λ^0-hyperon decay with respect to the line of flight of hyperons in the center-of-mass system of their generation. The literature contains indications as to the presence of the effect of asymmetry in the decay of Λ^0 generated on compound nuclei and in hydrogen by pions with a momentum of some Bev/c and by particles of cosmic radiation. On the other hand, no longitudinal polarization of Λ^0-hyperons has been established in a number of studies conducted on hydrogen at low and mean energies. In the present experiment, conducted with the aid of a doubled Wilson chamber at 1,800 m above sea level,

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as much as 162 V^0-decays were found. The chamber was controlled by penetrating showers. From among lead-generated V^0-decays, as much as 54 Λ^0-hyperons were identified. Of these, 24 Λ^0-decays with a momentum < 800 Mev/c were picked out. In these decays, the coefficient of asymmetry was found to be equal to -0.59 ± 0.28 in good agreement with -0.56 ± 0.15 and -0.58 ± 0.17 of earlier findings.

G. L.

[Abstracter's note: Complete translation]

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